

CLAIMS:

1. A low-pressure mercury discharge lamp comprising an envelope with an inner surface enclosing a discharge space in which a mercury comprising filling is accommodated, at least one electrode for generating ultraviolet radiation in said discharge space, and a phosphor layer formed over said inner surface to convert said ultraviolet radiation into light of the green wavelength region, wherein said phosphor layer consists of a water-dispersable blend of a yellow-green phosphor and a blue-green phosphor.
2. A low-pressure mercury discharge lamp according to claim 1, wherein said phosphor layer provides a light output of at least 3600 lumens at an operation life of 100 h.
3. A low-pressure mercury discharge lamp according to claim 1, wherein said yellow-green phosphor is a Ce, Tb activated phosphor, preferably gadolinium magnesium borate, activated by Ce, Tb; and wherein said blue-green phosphor is a Eu, Mn activated phosphor, preferably barium magnesium aluminate, activated by Eu, Mn.
4. A low-pressure mercury discharge lamp according to claim 1, wherein the weight ratio of yellow-green phosphor to blue-green phosphor is from 90:10 to 10:90, preferably 75:25 to 50:50.
5. A process for the preparation of a low-pressure mercury discharge lamp having green emission, comprising the application of a green-emitting phosphor layer on the inner surface of the envelope enclosing the discharge space of the lamp, wherein an aqueous suspension of a blend of a yellow-green phosphor and a blue-green phosphor is deposited on the inner surface, followed by drying to obtain a coating of a green phosphor layer on said inner surface.
6. A process according to claim 5, wherein said phosphor blend consists of a Ce, Tb activated gadolinium magnesium borate and a Eu, Mn activated barium magnesium aluminate, preferably in a proportion of 87-50% b.w. of gadolinium magnesium borate,

activated by Ce or Tb, to 13-50% b.w. of barium magnesium aluminate, activated by Eu and Mn.